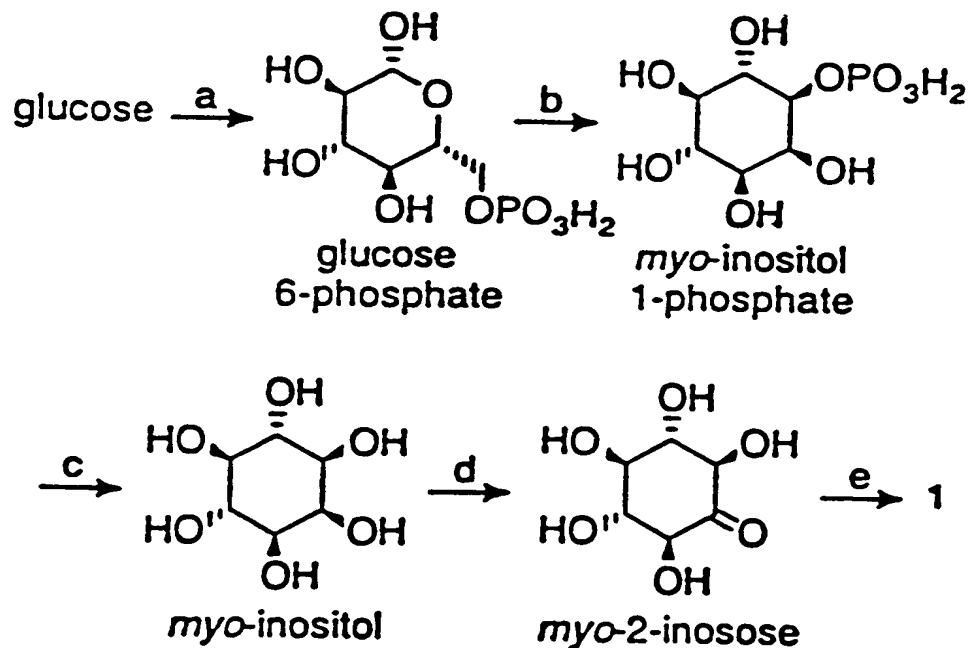


FIGURE 1



^aKey: (a) phosphoenolpyruvate:carbohydrate phosphotransferase; (b) myo-inositol 1-phosphate synthase; (c) phosphatase activity; (d) dehydrogenase activity; (e) 0.5 M H₂SO₄, H₂O, reflux.

FIGURE 2

2/4

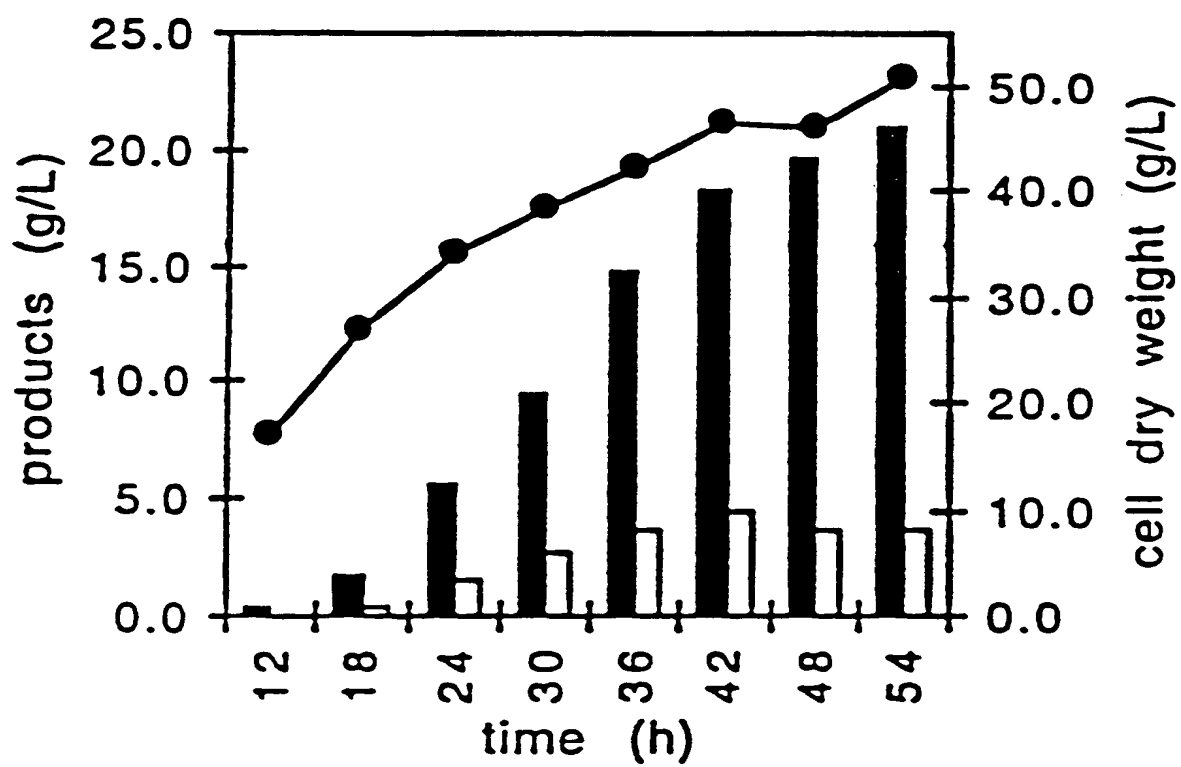
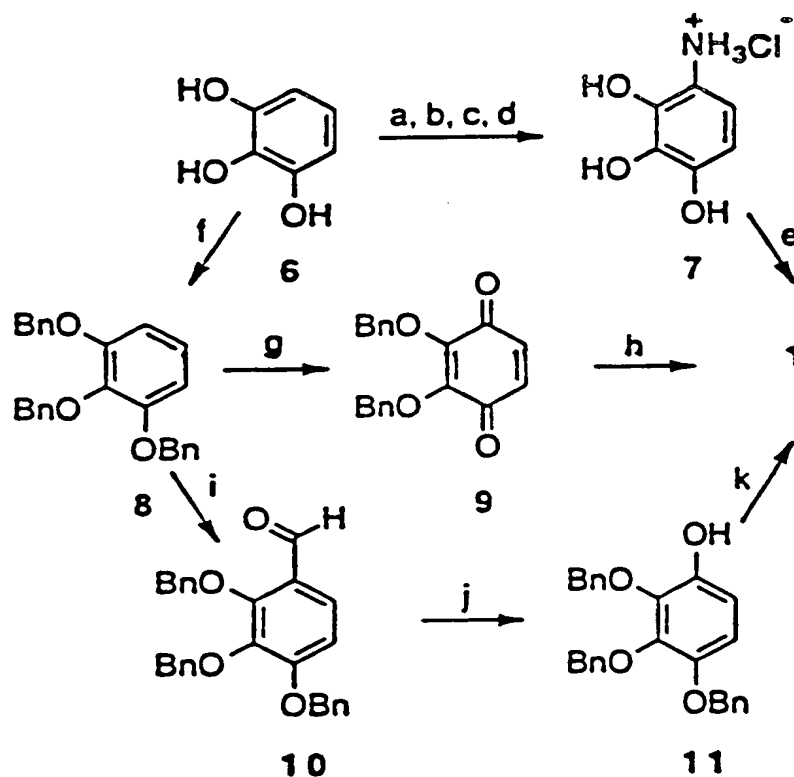


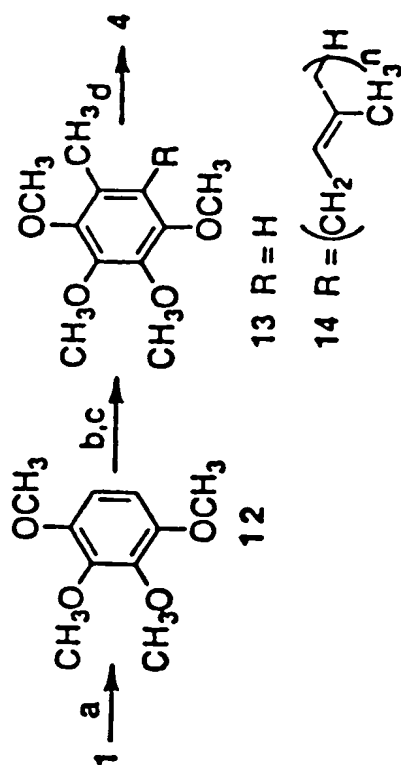
FIGURE 3



^aKey: (a) $\text{Cl}_2\text{C}(\text{O})$, pyridine, xylene, reflux; (b) H_2SO_4 , HNO_3 ; (c) KOH (aq.); (d) Zn , HCl ; (e) H_2O , reflux; (f) BnBr , K_2CO_3 , acetone, reflux, 83 %; (g) $\text{K}_3\text{Fe}(\text{CN})_6$, H_2O_2 , AcOH , 11 %; (h) H_2 , 10 % Pd/C , EtOH , 100 %; (i) *N*-methylformanilide, POCl_3 , 60 °C, 93 %; (j) HCO_2H , H_2O_2 , CH_2Cl_2 , 0 °C to rt. 95 %; (k) H_2 , 10 % Pd/C , EtOH , 80%.

FIGURE 4

4/4



^aKey: (a) (CH₃)₂SO₄, NaOH, 69 %; (b) (i) *n*-BuLi, TMEDA, hexanes, THF, 0 °C; (ii) CH₃I, 0 °C, 83%; (c) (i) *n*-BuLi, TMEDA, hexanes, 0 °C; (ii) CuCN, THF, Et₂O, 0 °C; (iii) famesyl bromide, -78 °C, 57 %; (d) CAN, pyridine-2,6-dicarboxylate, CH₃CN/H₂O, 0 °C, 46%.

FIGURE 5